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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,123	01/10/2002	Suk-beom Song	SAM-0292	8042

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EXAMINER

TRAN, TRANG U

ART UNIT PAPER NUMBER

2622

DATE MAILED: 04/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/044,123	Applicant(s) SONG, SUK-BEOM	
	Examiner Trang U. Tran	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 2,4,5,8-11,15 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 2, 4-5, 8-11, 15 and 17 are objected to because of the following informalities:

In claim 2, line 6, the phrase "a counted write address" should be changed to –the counted write address--, and line 8, the phrase "a demultiplexed data" should be changed to –the demultiplexed data--.

In claim 4, line 3, the phrase "a first graphic data" should be changed to –the first graphic data--, and line 6, the phrase "a first video data" should be changed to –the first video data--.

In claim 5, line 3, the phrase "the first and second" should be changed to –the first and second data--.

In claim 8, line 14, the phrase "an overflow" should be changed to –the overflow--.

In claim 9, line 5, the phrase "a delayed video" should be changed to –the delayed video--.

In claim 10, line 9, the phrase "a first memory" should be changed to –the first memory--.

In claim 11, line 5, the phrase "for first input data" should be changed to –for the first input data --, and line 7, the phrase "for first input data" should be changed to –for the first input data --.

In claim 15, line 2, the phrase "one of the first and second" should be changed to --one of first and second --, and line 5, the phrase "a frame rate" should be changed to --the frame rate --.

In claim 17, line 5, after the word "(d4)" should add the phrase --wherein M is a storage size of the second memory, F is an image size of one frame, Pi is the position of frame data being read when one frame data begin to be input in the second memory, and R\_fr is an output frame rate input frame rate--.

Appropriate correction is required.

2. The following is an examiner's statement of reasons for allowance:

The present invention is directed to an image processing apparatus for displaying a plurality of input data asynchronously input through different channels on one display device. Each independent claims identifies the uniquely distinct features: "a first memory for multiplexing the second data according to time sharing, storing the second data in different regions, and outputting the stored second data in response to a first memory enabling signal; and a memory control unit for (i) detecting underflow conditions in the first memory and detecting overflow conditions in the third memory, (ii) generating the first memory enabling signal that is applied to the first memory to control data flow between the first memory and the second memory, (iii) generating the frame buffer control signal applied to the second memory to control frame rates of the input data and to control frame rates of the display signal in response to the underflow and overflow conditions, and (iv) generating the second memory enabling signal that is applied to the third memory to control data flow between the second memory and the

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third memory". All the references of record, either singularly or in combination, fail to anticipate or render the above underlined limitations obvious.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trang U. Tran whose telephone number is (571) 272-7358. The examiner can normally be reached on 8:00 AM - 5:30 PM, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TT  
April 16, 2006



Trang U. Tran  
Examiner  
Art Unit 2622